

The Impact of Aged Patients on Hospital Use and Income

CHARLES M. ROYLE and AGNES W. BREWSTER

MEASUREMENT of the adequacy of hospital insurance protection among older hospital patients was of interest to the institutions belonging to the Hospital Association of New York State, Inc., because of problems older insured patients were experiencing in financing their hospital bills. In the spring of 1964, before passage of Medicare was certain, the Hospital Educational and Research Fund, Inc., the association's research arm, decided it should determine what the dimensions of the gaps in hospital insurance protection for the aged were.

Before a study was undertaken encompassing all hospitals in the northeastern region, however, a feasibility study was adopted as a first step to show whether the desired information could be abstracted from hospital records and to determine the cost per abstracted case as a basis for estimating costs in a more comprehensive study. The Public Health Service, Health Economics Branch, Division of Medical Care Administration, Bureau of State Services (Community Health), provided almost half the funds for this feasibility study.

Mr. Royle is executive director, Hospital Educational and Research Fund, Inc., Hospital Association of New York State, Inc., Albany, N.Y., and Mrs. Brewster is chief of the Health Economics Branch, Division of Medical Care Administration, Bureau of State Services (Community Health), Public Health Service.

Albany Medical Center, a large teaching hospital with a wide variety of cases, was selected for the feasibility study. Its service area encompasses 18 neighboring counties, and it also admits patients from other States and from abroad.

On a normal day this 670-bed hospital has 637 bed patients and 40 operations are performed. The average length of stay in the 3-month study period, February–April 1964, was 11.4 days, compared with 7.7 days in 1964 for all short-term general hospitals in the United States (1). The longer stay in the Albany Medical Center indicates that many of its cases are more complicated and that its patients therefore require longer stays than patients in nonteaching hospitals.

The study covered all discharges from the Albany Medical Center during the period February–April 1964. Data were abstracted from the patient record and hospital bill on age, sex, length of stay, type of accommodation, total hospital bill, room and board charges, and all other charges. Data on sources of payment and discharge status (alive or dead) were obtained only for patients 65 years and over. No attempt was made to obtain diagnostic information, as it did not appear relevant to the subject under study.

Hospital and hospital councils planning to abstract data from patients' records may find the per bill data helpful in estimating how

Table 1. Time and cost for each study procedure per patient billing

Study procedure	Number of minutes			Cost per billing		
	All ages	Under 65	65 and over	All ages	Under 65	65 and over
All procedures---	14. 51	13. 89	24. 49	\$1. 31	\$1. 24	\$1. 73
Data abstraction---	10. 80	10. 28	20. 28	. 51	. 45	. 88
Tabulating-----	. 70	. 60	1. 20	. 07	. 06	. 12
Key punching---	. 50	. 40	1. 00	. 05	. 04	. 10
Sorting and tabulating---	. 20	. 20	. 20	. 02	. 02	. 02
Analysis-----	3. 01	3. 01	3. 01	. 73	. 73	. 73

much it will cost to examine age and sex differences in relation to the utilization of hospital services and to the charges incurred by patients. The data on utilization illustrate the impact of variations in the mixture of patients on hospital utilization and hospital income.

One conclusion from the feasibility study was that unless discharged patients, their families, or the executors of their estates are interviewed, the complete picture on the patients' voluntary health insurance coverage cannot be obtained. Nothing on the admission and discharge record or billing forms indicated that any of the self-paying patients had insurance. An estimate based on a sample of 50 consecutive self-pay cases revealed that less than 2 percent of the self-paying patients later requested copies of their hospital bills for purposes of filing insurance claims.

Determination of Study Cost

In the study period, records were abstracted for 4,520 patients, including 644 patients age 65 and over and 3,876 patients under 65. Data on source of payment were obtained only for the group 65 and over.

Abstracting the records for these 4,520 patients required 1,093 man-hours of skilled clerical personnel, or nearly 137 man-days of 8 hours each. A time breakdown and cost for each function per patient billing is shown in table 1. Had more complete data been obtained on the patients under age 65, the time would have averaged just under 25 minutes per billing.

Associated costs would have been \$1.73 per billing instead of \$1.31. The total cost of the project would have come to \$7,820 instead of the \$5,916 actually spent.

Hospital Utilization

In the period February-April 1964, patients who had passed their 65th birthday constituted a fairly typical proportion of all patients in the Albany Medical Center, according to National Health Survey data (table 2). Representing 14 percent of the patients discharged in that period, these persons used 20 percent of the total hospital days of care. In contrast to the average stay of 10.6 days per admission for younger patients, the average stay of members of this older group was 16.1 days. These average stays, while longer than those reported for patients in the National Health Interview Survey (2), are usual in a teaching hospital.

During the study period, the number of male and female patients over 65 years of age was equal (322). Had females predominated in the group of 644 aged patients, more hospital days of care would probably have been required, since aged females through age 79 stayed longer on the average than their male counterparts. Table 3 shows the percentage distribution of patients discharged in the study period and of their days of care and average length of stay, by age and sex.

Table 2. Comparison of days of hospital care for Health Interview Survey national sample and Albany Medical Center patients

Age (years)	Discharged patients		Days of care		Average stay (days)
	Number	Percent	Number	Percent	
Health Interview Survey (in thousands)---	23, 799	100. 0	192, 676	100. 0	8. 1
Under 65-----	20, 564	86. 4	153, 647	79. 7	7. 5
65 and over-----	3, 235	13. 6	39, 029	20. 3	12. 1
Albany Medical Center Hospital-----	4, 520	100. 0	51, 373	100. 0	11. 4
Under 65-----	3, 876	85. 8	41, 007	79. 8	10. 6
65 and over-----	644	14. 2	10, 366	20. 2	16. 1

SOURCE: Reference 2.

Discharge Status (Alive or Dead)

Data have not been generally available on the proportion of patients in each age and sex group whose hospital stay is terminated by death. Table 4 provides information on the discharge status (alive or dead) of patients in the Albany Medical Center for five age groups from 65 years to 85 and over. For the entire group over 65, nearly 15 percent of hospital stays ended with death. Although, in general, the proportion discharged dead increased with advancing age, exceptions were noted—among women aged 80–84 and persons of both sexes aged 75–79.

Only 59 percent of men 85 and over were discharged alive; for women 85 and over, the comparable figure was 69 percent.

Sources of Payment

The hospital records showed the extent to which insurance paid for care received by the patients over 65 years (table 5). Income to the hospital was assured for a large segment of this care because of the preponderance of Blue Cross coverage among aged patients in semiprivate rooms.

Table 3. Percentage distribution of discharged patients and of days of care and average length of stay, Albany Medical Center, February–April 1964

Age (years)	Discharged patients (percent of total)			Days of care (percent of total)			Average stay (days) ¹		
	Both sexes (N= 4,520)	Male (N= 1,781)	Female (N= 2,739)	Both sexes (N= 51,373)	Male (N= 23,742)	Female (N= 27,631)	Both sexes	Male	Female
Under 65.....	85.8	81.9	88.2	79.8	78.5	81.0	10.6	12.8	9.3
Under 18.....	17.6	24.4	13.1	14.3	16.2	12.6	9.2	8.9	9.7
Under 6.....	8.7	12.7	6.1	7.5	9.0	6.1	9.7	9.5	10.1
6–11.....	4.5	6.4	3.3	3.0	3.9	2.2	7.5	8.1	6.8
12–17.....	4.3	5.2	3.7	3.8	3.3	4.3	10.0	8.3	11.6
18–64.....	68.2	57.6	75.1	65.5	62.3	68.3	10.9	14.4	9.2
18–34.....	27.7	14.7	36.2	18.8	13.4	23.6	7.7	12.2	6.6
35–49.....	19.8	16.5	22.1	17.9	14.6	20.7	10.3	11.8	9.5
50–64.....	20.6	26.4	16.8	28.8	34.3	24.0	15.9	17.3	14.4
65 and over.....	14.2	18.1	11.8	20.2	21.5	19.0	16.1	15.9	16.3
65–69.....	4.4	5.2	3.9	5.9	5.7	6.1	15.2	14.6	15.8
70–74.....	3.8	5.6	2.6	5.5	6.7	4.5	16.5	16.0	17.1
75–79.....	3.2	4.0	2.7	4.5	4.4	4.6	15.8	14.5	17.1
80–84.....	1.9	2.3	1.6	2.7	3.1	2.3	16.5	18.2	14.9
85 and over.....	1.0	1.0	.9	1.6	1.6	1.6	18.9	22.1	16.8

¹ Average stay for male and female patients of all ages combined was 11.4 days; for male patients of all ages it was 13.3 days and for female, 10.1 days.

Table 4. Discharges and deaths of patients 65 years and over, Albany Medical Center, February–April 1964

Age (years)	Total number discharged			Percent of total discharged dead		
	Both sexes	Male	Female	Both sexes	Male	Female
65 and over.....	644	322	322	14.6	17.1	12.1
65–69.....	200	93	107	10.0	11.8	8.4
70–74.....	171	99	72	14.0	15.2	12.5
75–79.....	146	72	74	13.7	15.3	12.2
80–84.....	84	41	43	17.9	26.8	9.3
85 and over.....	43	17	26	34.9	41.2	30.8

Table 5. Percent of hospital care of discharged patients 65 years and over paid for by insurance, according to type of accommodation, Albany Medical Center, February–April 1964

Accommodation	All aged patients ¹	Insured aged patients	
		Blue Cross	Other
All types.....	57.5	91.5	58.0
Private room.....	66.6	89.2	60.2
Semiprivate room.....	68.3	94.9	56.6
Ward.....	26.5	86.3	59.0

¹ Includes self-pay patients who reported no insurance and welfare patients.

Examination of the data in table 6 on source of payment shows that in the group of 644 patients 65 years and over, 325 had Blue Cross coverage and 92 had commercial insurance; the care of 96 was financed by welfare funds. One patient in five paid his own bill entirely, or the payment was otherwise privately financed. Some 27 percent of those 65 and over, but only 11 percent of those under 65, had bills exceeding \$1,000, a reflection of the longer stays of aged persons. An observation difficult to explain is that a larger proportion (13 percent) of persons 65 and over in the "Other insurance" category

than those 65 and over who were Blue Cross-insured (7.7 percent) had bills of \$2,000 and more. Approximately 7.5 percent of all patients 65 and over had bills in excess of \$2,000.

Table 7 shows the cumulative percentage distribution of discharged patients by length of stay, source of payment for care, and broad age group. Only 5.3 percent of those under age 65, compared with 13.3 percent of the group 65 and over, remained beyond 29 days. Among the aged, welfare patients remained the longest, 22.9 percent staying 30 days or more. Notable was the small proportion of self-pay patients who remained 30 days or more—7 percent.

The number of days of care, the average stays, and the charges are compared by source of payment and by type of accommodation in tables 8 and 9. The significance of Blue Cross coverage in occupancy of semiprivate rooms is evident. Some 63 percent of semiprivate room usage (days of care) by patients 65 and over was accounted for by days of care for persons with Blue Cross insurance. The proportion was even higher for private rooms; for the two classes together, the proportion came to about two-thirds of the total usage. Self-pay patients 65 and over were responsible for more of the remaining days than were aged persons with other insurance. Welfare patients occupied 53 percent of the ward beds used by patients 65 and over.

Table 6. Percentage distribution of discharged patients by size of hospital bill, source of payment, and age, Albany Medical Center, February–April 1964

Hospital bill	Age and source of payment (percent of total patients)						
	All ages (N=4,520)	Under 65 (N=3,876)	65 years and over				
			All sources (N=644)	Blue Cross (N=325)	Other insurance (N=92)	Self-pay ¹ (N=131)	Welfare (N=96)
Under \$100.....	4.0	4.3	1.9	.9	1.1	.8	7.3
\$100–\$199.....	20.3	22.7	6.0	5.5	2.2	6.1	11.5
\$200–\$299.....	17.1	18.6	8.2	7.4	10.9	6.9	10.4
\$300–\$399.....	13.3	12.8	16.3	15.7	17.4	17.6	15.6
\$400–\$499.....	9.3	9.2	10.1	11.7	9.8	8.4	7.3
\$500–\$999.....	22.5	21.1	30.6	29.5	32.6	38.1	21.9
\$1,000–\$1,999.....	9.5	7.8	19.4	21.6	13.0	19.1	18.8
\$2,000–\$3,999.....	3.2	2.6	6.9	6.8	11.9	3.1	7.3
\$4,000 and over.....	.8	.8	.6	.9	1.1	-----	-----

¹ Includes a few persons who had insurance, but fact was not known to hospital at time of discharge.

The aged patient's length of stay, the average charges per day and per stay, and the proportion of these that were for room and board varied by type of accommodation and source of payment. Blue Cross payments applied to charges for room and board of patients 65 and over in semiprivate rooms were, when averaged, slightly above the average payments for all patients 65 and over who occupied semiprivate rooms. Self-pay aged patients were charged higher rates on the average for private rooms than Blue Cross-insured or other insured patients. Welfare-supported patients occupied ward beds carrying a slightly higher average room-and-board charge than the average charge recorded for the other three classes of ward patients. The average total charge per patient in a ward bed was less for welfare patients than for insured patients, even though the welfare patients had longer average stays.

Sixty-five percent of the patients 65 and over who were admitted during the study period had Blue Cross or other insurance, 15 percent relied on welfare payments, and the remaining 20 percent paid their own hospital bills (table 10). Some variation in source of payment was observed by sex, and considerable variation by age. Sixty-seven percent of the aged men admitted in the period had Blue Cross or other insurance, compared with 62 percent of the aged women. Aged women relied slightly less than aged men on welfare payment. Six percent more women than men were in the self-pay category. Separation of the patients 65-74 years from those 75 and over

Table 8. Percentage distribution of discharged patients aged 65 and over and of days of care, with average length of stay, by source of payment and type of accommodation, Albany Medical Center, February-April 1964

Accommodation and category	Number	Source of payment (percent of total)			
		Blue Cross	Other insurance	Self-pay ¹	Welfare
<i>Discharged patients</i>					
Total.....	644	50.5	14.3	20.3	14.9
Private.....	139	61.9	13.7	24.5	-----
Semiprivate.....	337	62.3	15.1	20.2	2.4
Ward.....	168	17.3	13.1	17.3	52.4
<i>Days of care</i>					
Total.....	10,366	50.7	15.1	16.4	17.7
Private.....	2,330	67.3	13.0	19.6	-----
Semiprivate.....	4,798	63.4	15.8	18.0	2.8
Ward.....	3,238	20.0	15.6	11.8	52.7
<i>Average stay (days)</i>					
Total.....	16.1	16.2	17.0	13.0	19.1
Private.....	16.8	18.2	16.0	13.4	-----
Semiprivate.....	14.2	14.5	14.9	12.7	16.6
Ward.....	19.3	22.3	23.0	13.2	19.4

¹ Includes a few persons who had insurance, but fact was not known to hospital at time of discharge.

showed that the younger group had considerably better insurance coverage for their hospital stays. Approximately 70 percent of the younger group, compared with 58 percent of the older group, had Blue Cross or other insur-

Table 7. Cumulative percentage distribution of discharged patients by length of stay, source of payment for care, and broad age group, Albany Medical Center, February-April 1964

Hospital stay (days)	All ages	Under 65 years	Source of payment of patients 65 and over				
			All sources	Blue Cross	Other insurance	Self-pay ¹	Welfare
1-2.....	11.5	12.4	5.9	5.5	4.3	6.9	7.3
3-4.....	30.2	32.9	13.5	13.2	10.8	15.3	14.6
5-9.....	62.0	65.1	42.4	41.8	42.3	46.5	38.6
10-14.....	78.4	81.0	62.3	63.0	63.0	66.3	53.2
15-29.....	93.7	94.7	86.9	88.2	83.7	93.0	77.1
30-59.....	98.7	98.7	97.5	97.5	97.8	99.2	94.9
60 and over.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Includes a few persons who had insurance, but fact was not known to hospital at time of discharge.

ance. Relatively more patients in the older group had to rely on their own resources to pay for their hospital stays.

Impact of Aged on Hospital Income

Relatively more of the aged study patients than of the younger patients occupied ward beds, and they remained longer periods in the hospital on the average (table 11). Ward patients regardless of age had the longest stays.

Table 9. Average charge per day and per stay for patients aged 65 years and over, by source of payment and type of accommodation, Albany Medical Center, February-April 1964

Payment source and accommodation	Average charge		Room and board charges	
	Per day	Per stay	Average per day	Per-cent of all charges
<i>All payment sources</i>				
All accommodations...	\$51.74	\$832	\$27.56	53.3
Private.....	59.85	1,003	31.63	52.8
Semiprivate.....	55.02	783	28.59	52.0
Ward.....	41.02	790	23.11	56.3
<i>Blue Cross</i>				
All accommodations...	53.97	872	28.67	53.1
Private.....	59.50	1,085	30.89	51.9
Semiprivate.....	53.80	779	28.84	53.6
Ward.....	41.32	920	22.49	54.4
<i>Other insurance</i>				
All accommodations...	53.55	912	27.27	50.9
Private.....	62.58	1,001	31.72	50.7
Semiprivate.....	58.46	870	28.28	48.4
Ward.....	40.73	935	23.07	56.6
<i>Self-pay¹</i>				
All accommodations...	57.83	752	28.81	49.8
Private.....	59.25	796	34.09	57.5
Semiprivate.....	58.95	749	28.52	48.4
Ward.....	53.59	705	23.17	43.2
<i>Welfare</i>				
All accommodations...	38.16	730	23.49	61.5
Private.....	0	0	0	0
Semiprivate.....	37.87	629	25.29	66.8
Ward.....	38.18	739	23.35	61.1

¹ Includes a few persons who had insurance, but fact was not known to hospital at time of discharge.

Per diem charges were lowest for ward beds regardless of age or sex, but the charges per case were generally higher than for patients in semiprivate accommodations because of the ward patients' longer stays (table 12). The range in average billings per patient-stay went from a low of \$430 for female patients under 65 in a ward bed to a high of \$1,167 for a male patient 65 or over in a private room. No consistent pattern which appeared to reflect any variation by sex in the average length of stay was observed in charges per case between aged men and women by type of accommodation.

The proportion of the total bill represented by room-and-board charges varied by type of accommodation but within a rather narrow range—from 51.7 percent to 56.7 percent for patients under 65 and from 52.0 percent to 56.3 percent for those over 65. This proportion varied more among aged men than aged women. It was lower for aged men, an indication that they used more ancillary services than the aged women did.

The study illuminated the impact of the aged on the Albany Medical Center's facilities, as measured by days of care, and their impact on hospital income, as measured by billed charges. The 644 patients 65 years and over who were discharged during the 3-month study

Table 10. Percentage distribution of discharges for patients aged 65 and over by source of payment, Albany Medical Center, February-April 1964

Sex and age (years)	Number of patients	Source of payment (percent of total patients)			
		Blue Cross	Other insurance	Self-pay ¹	Welfare
Both sexes.....	644	50.5	14.3	20.3	14.9
65-74.....	371	54.2	15.4	15.1	15.4
75 and over....	273	45.4	12.8	27.5	14.3
Male.....	322	50.9	16.1	17.4	15.5
65-74.....	192	54.2	17.2	11.5	17.2
75 and over....	130	46.2	14.6	26.2	13.1
Female.....	322	50.0	12.4	23.3	14.3
65-74.....	179	54.2	13.4	19.0	13.4
75 and over....	143	44.8	11.2	28.7	15.4

¹ Includes a few persons who had insurance, but fact was not known to hospital at time of discharge.

Table 11. Percentage distribution of discharged patients and of days of care, with average length of stay, by type of accommodation, age, and sex, Albany Medical Center, February-April 1964

Age and accommodation	Percent of total						Average stay (days)		
	Discharged patients			Days of care			Both sexes	Male	Female
	Both sexes (N=4,520)	Male (N=1,781)	Female (N=2,739)	Both sexes (N=51,373)	Male (N=23,742)	Female (N=27,631)			
<i>All ages</i>									
All accommodations-----	100.0	100.0	100.0	100.0	100.0	100.0	11.4	13.3	10.1
Private-----	14.1	12.1	15.4	14.8	13.3	16.1	11.9	14.6	10.6
Semiprivate-----	64.9	64.0	65.5	58.6	54.6	62.1	10.3	11.4	9.6
Ward-----	21.0	23.9	19.1	26.5	32.1	21.8	14.4	17.9	11.5
<i>Under 65 years</i>									
All accommodations-----	100.0	100.0	100.0	100.0	100.0	100.0	10.6	12.8	9.3
Private-----	12.9	10.7	14.2	12.9	11.1	14.4	10.6	13.3	9.4
Semiprivate-----	67.0	66.1	67.5	61.8	57.1	65.7	9.8	11.0	9.0
Ward-----	20.1	23.2	18.3	25.4	31.8	20.0	13.3	17.6	10.1
<i>65 years and over</i>									
All accommodations-----	100.0	100.0	100.0	100.0	100.0	100.0	16.1	15.9	16.3
Private-----	21.6	18.6	24.5	22.5	21.3	23.7	16.8	18.1	15.7
Semiprivate-----	52.3	54.3	50.3	46.3	45.8	46.7	14.2	13.4	15.2
Ward-----	26.1	27.0	25.2	31.2	32.9	29.6	19.3	19.3	19.2

period comprised 14.2 percent of all patients discharged during that period and accounted for 20.2 percent of the days of inpatient care provided by the center. Their total charges amounted to 20.5 percent of all patient charges in the period—20.2 percent of the room-and-board charges and 20.8 percent of other charges.

Room-and-board charges constituted more than half of the entire billings to patients in this period. Since these charges customarily do not vary by the age of the patient occupying a particular bed, it is not surprising that the proportion of such charges among aged patients matched the proportion of total days used by aged patients. The proportion of the composite item, "Other charges," incurred by the aged was very slightly above the aged's impact on the hospital's activities as measured by days. (Unpublished data analyzed by the Public Health Service, in which billings in Massachusetts hospitals for patients 65 and over were compared with billings for all patients, show the reverse pattern, particularly in smaller hos-

pitals.) A teaching hospital would probably routinely make more diagnostic tests on patients known to have several chronic ailments.

Conclusion

Because a hospital has to be prepared at all times to serve all kinds of patients, many of its operating costs are fixed. Variable costs lie only in expenditures for such items as food, drugs, bandages, and laundry—items not affected by the age or sex of the patients but only by bed occupancy. The kind of information obtained in this pilot study on the variations in typical lengths of hospital stays according to the patient's hospital accommodations (ward, semiprivate, private) may enable hospital administrators to review their budgets, charges, and income more knowledgeably. Cost-finding to make room-and-board charges for each accommodation equate more closely with costs seems appropriate. Time and motion studies of differences in nursing time for

Table 12. Average hospital bill per day and per patient stay, and room and board as a percentage of total charges, by age, type of accommodation, and sex, Albany Medical Center, February–April 1964

Age (years) and type of accommodation	Average bill						Room and board as percent of total charges		
	Per day			Per stay			Both sexes	Male	Female
	Both sexes	Male	Female	Both sexes	Male	Female			
<i>All ages</i>									
All accommodations.....	\$50.99	\$51.06	\$50.93	\$580	\$681	\$514	53.9	52.8	54.8
Private.....	61.61	65.22	59.06	736	953	625	52.0	49.1	54.4
Semiprivate.....	52.84	54.25	51.77	543	617	495	53.5	51.9	54.7
Ward.....	40.98	39.75	42.53	589	712	489	56.6	57.6	55.5
<i>Under 65</i>									
All accommodations.....	50.80	50.48	51.07	537	645	473	54.0	53.4	54.6
Private.....	62.39	65.61	60.32	661	870	566	51.7	49.2	53.5
Semiprivate.....	52.42	53.57	51.59	511	590	465	53.8	52.5	54.6
Ward.....	40.96	38.00	42.67	543	696	430	56.7	58.0	55.1
<i>65 and over</i>									
All accommodations.....	51.74	53.15	50.36	832	843	822	53.3	51.0	55.6
Private.....	59.85	64.47	55.82	1,003	1,167	879	52.8	48.9	56.8
Semiprivate.....	55.02	57.36	52.80	783	767	801	52.0	49.4	54.6
Ward.....	41.02	39.99	42.14	790	773	810	56.3	56.3	56.4

different classes of patients, by age or diagnosis, might show that a more realistic pricing system should be substituted for the time-honored differential pricing of private rooms, semi-private rooms, and ward accommodations. Conceivably, floor care of an aged person on a ward may be far more expensive than the floor services required by a patient in a private room whether or not a private nurse attends the patient in the private room.

Summary

Before undertaking a multi-hospital project to measure the adequacy of the voluntary health insurance coverage of discharged patients, the Hospital Education and Research Fund, Inc., undertook a pilot study to determine whether the requisite data could be obtained from hospital records and what the cost per discharged patient would be for abstracting the data.

The requisite data were sought from records of patients discharged from the Albany Medical Center, Albany, N.Y., during the period

February–April 1964. It was possible to obtain and analyze data about 4,520 such patients; more extensive information was obtained on 644 who were 65 and over. The analysis covered the days of care, average stay, discharge status (alive or dead), sources of payment for care, and hospital charges by age and sex. Much of the information was cross-tabulated by type of accommodation the patient occupied.

Cost per billing of abstracting the data averaged \$1.31 for all patients, \$1.24 for patients under 65, and for patients 65 and over—on whom more complete data were obtained—\$1.73.

Patients 65 and over comprised 14.2 percent of the discharged patients and used 20.2 percent of the total days of inpatient care provided in the period. Total charges for their care amounted to 20.5 percent of patient charges.

The study entailed combining the information from the center's accounting department, where charges were billed and health insurance benefits were recorded, with information from other records. Differences in patterns of

bed use by patients under age 65 and 65 and over, and by insurance type (recorded only for the aged), were found. Ten percent of the 65-69 year old patients were discharged dead, compared with 35 percent of those age 85 and over; the overall rate of patients discharged dead for all patients who had passed their 65th birthday was 15 percent.

REFERENCES

- (1) American Hospital Association: Hospitals, guide issue, vol 39, Aug. 1, 1965.
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100,000 Social Workers Needed

According to the results of a 3-year study by a Department of Health, Education, and Welfare task force about 100,000 social workers must be recruited and trained during the next 5 years to meet the growing need in welfare agencies, schools, courts, hospitals, and other public and voluntary programs. The estimate covers only activities that receive Department support.

By 1970, almost 50,000 more workers will be needed by welfare agencies to help needy people who depend on public assistance programs to help them overcome health, housing, family, vocational, and other problems which contribute to their poverty.

The second major need is for 38,500 workers who specialize in services to children. Schools need 17,000 more to help children with physical, mental, emotional, and other problems. Juvenile courts, probation agencies, correctional institutions, and other public agencies that serve delinquent and other youth need 11,500. Public child welfare agencies need an additional 10,000 to help the neglected, abused, homeless, and children with special problems.

About 10,500 more social workers are needed for new federally aided community mental health programs and for mental hospitals and other facilities for the mentally ill. An additional 6,000 medical social workers will be required to staff hospitals, clinics, and other medical facilities. Special programs, such as those serving the elderly, account for the remainder of the need.

Findings of the task force emphasized the need for:

- Expansion of graduate and undergraduate training facilities. The 59 accredited graduate schools of social work which accommodate about 7,000 students are filled to capacity. Enrollments of graduate social work schools should be tripled as rapidly as possible. Undergraduate majors in social work, in 1963-64, accounted for only one-fourth of 1 percent of the one-half million students who received bachelor degrees.

- Scholarship aid. The high cost of education calls for vastly increased student aid if more outstanding students are to be attracted to the social work profession as a career.

- Better salaries. The median beginning salary for public assistance workers is only \$4,325 per year.

- More aggressive recruitment programs. Less than 1 percent of college graduates go into social work at present; 4 to 5 percent are needed in this field.

- Licensure and classification. Licensing social workers and classifying other social service employees would help to assure more efficient use of manpower by encouraging employing agencies to design their work to use maximum skills of employees at this level.

- A data collection system. The task force recommended the establishment of a continuing program to collect data on which manpower planning and development could be based.